AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Fig 4. This sheet replaces the original sheet including Fig 4. In Figure 4, the ring magnet has been shown as having a cylindrical shape. Applicants respectfully submit that the replacement sheet does not include new matter, as support for the drawing amendment can be found on page 7, lines 3-7, and in Fig 5.

REMARKS

Claims 1 and 10-31 are pending in the application. Claims 1, 10, 15, 16, 20 and 21 have been amended. Claims 22-31 are newly added. Claims 2-9 have been canceled in order to advance the application to issue. However, such cancellation should not be taken as an acquiescence of the appropriateness of the rejection. Reconsideration of the rejection and allowance of the pending application in view of the following remarks are respectfully requested.

As an initial matter, Applicants would like to thank the Examiner for acknowledging Applicants' claim for foreign priority, and receipt of all certified copies of the priority documents.

Applicants wish to bring to the Examiner's attention the fact that Applicants filed an Information Disclosure Statement on February 23, 2005. Applicants note that the Examiner has inadvertently failed to return a completed copy of the PTO-1449 Form that accompanied the filed Information Disclosure Statement to confirm his consideration of all of the documents cited therein. Applicants respectfully request that the Examiner return a completed copy of the PTO-1449 Form in the next official communication to confirm his consideration of all the documents cited in the Information Disclosure Statement.

Also, Applicants note that the Examiner applied Elliott et al. (U.S. Patent No. 4,694,210) in a 35 U.S.C. § 103(a) rejection of claims 2-4, 8 and 9, but did not list Elliott et al. on the PTO-892 Form (Notice of References Cited). Applicants respectfully request that the Examiner list the Elliott reference on a PTO-892 Form and include the PTO-892 Form with the next Official

communication to ensure that this document is listed on the first page of a patent that issues from this application.

In the Office Action, the Examiner rejected claim 1 under 35 U.S.C. §102(b) as being anticipated by Ivanics (U.S. Patent No. 4,745,318). Applicants respectfully traverse the rejection for at least the following reasons.

The present invention is directed towards a single phase induction motor. The motor includes, inter alia, a stator installed in an inner circumferential surface of a motor body, a rotor rotatably installed in a center portion of the stator, and a magnet unit freely and rotatably installed between the stator and the rotor.

In one embodiment of the present invention, the magnet unit includes a back yoke and a plurality of magnets attached to an outer circumferential surface of the back yoke (see, for example, pages 7 and 8 and Figures 6-8 of Applicants' specification). The plurality of magnets substantially surround the entire outer circumferential surface of the back yoke.

In another embodiment of the present invention, the magnet unit includes a molding and a plurality of magnets formed inside the molding (see, for example, pages 8-11 and Figures 10-12 of Applicants' specification). The molding completely surrounds each of the plurality of magnets.

Ivanics relates to an induction motor with a secondary rotor. The motor includes a rotor and a rotary element 6 which is freely rotatable with respect to the rotor. See col. 4, lines 28-33. In one embodiment, the rotary element 6 includes a retaining cylinder 22, and ferromagnetic segments 21 which are glued-

on an inner or outer upper surface of the retaining cylinder 22. See col. 5, lines 47-59 and Figures 6 and 7.

However, as illustrated in Figure 6, Ivanics' ferromagnetic segments 21 do not substantially surround the entire outer circumferential surface of the retaining cylinder 22. This differs from Applicants' instant invention, in which a plurality of magnets substantially surround the entire outer circumferential surface of a back yoke of a magnet unit, as illustrated, for example, in Figure 8.

Thus, Applicants respectfully submit that Ivanics fails to anticipate (or even suggest) a single phase induction motor which includes a magnet unit including a back yoke and a plurality of magnets, where the plurality of magnets are attached to an outer circumferential surface of the back yoke and substantially surround the entire outer circumferential surface of the back yoke, as recited in independent claim 1. For at least these reasons, Applicants respectfully submit that the 35 U.S.C. § 102(b) rejection of claim 1 is improper, and respectfully request the Examiner to withdraw the rejection.

In the Office Action, the Examiner rejected claims 2-4, 8 and 9 as being unpatentable under 35 U.S.C. § 103(a) over Ivanics in view of Elliott et al. (U.S. Patent No. 4,694,210). As noted above, the claims are canceled by the present amendment. Thus, Applicants submit that it is not necessary to respond to the appropriateness of this rejection.

In the Office Action, the Examiner rejected claims 5-7 and 10-15 under 35 U.S.C. § 103(a) over Ivanics in view of Elliott and further in view of Shiga et al.

(U.S. Patent No. 6,093,984). Applicants respectfully traverse the rejection for at least the following reasons.

Elliott relates to a brushless DC motor. Applicants respectfully submit that Elliott fails to disclose or suggest a magnet unit that includes a back yoke and a plurality of magnets attached to an outer circumferential surface of the back yoke.

Shiga relates to a rotor for an electric motor. The rotor 28 includes rotor magnets 38 which are mounted on an inner circumferential face of a rotor yoke 35. See Figure 1 and col. 5, lines 15-34.

However, Shiga does not disclose or suggest that the electric motor includes a magnet unit freely and rotatably installed between the rotor and a stator. Rather, the rotor yoke 35 is formed as part of the rotor 28. Further, Shiga's rotor magnets 38 are clearly formed on the ***inner*** circumferential face of the rotor yoke 35, as shown in Figure 1.

Thus, Applicants respectfully submit that the combination of Ivanics, Elliott and Shiga fails to disclose or suggest a single phase induction motor which includes a magnet unit including a back yoke and a plurality of magnets, where the plurality of magnets are attached to an outer circumferential surface of the back yoke and substantially surround the entire outer circumferential surface of the back yoke, as recited in independent claim 1.

For at least the reasons set forth above, Applicants respectfully submit that independent claim 1 is in condition for allowance.

Dependent claims 10-15 (claims 5-7 being canceled) are also submitted to be in condition for allowance for at least the same reasons as those set forth above with respect to independent claim 1.

In the Office Action, the Examiner rejected claims 16-21 as being unpatentable under 35 U.S.C. § 103(a) over Ivanics in view of Elliott and further in view of Bernreuther et al. (U.S. Patent Application Publication No. 2003/0168925). Applicants respectfully traverse the rejection for at least the following reasons.

As noted above, Ivanics is directed to an induction motor with a secondary rotor. The motor includes a rotor and a rotary element 6 which is freely rotatable with respect to the rotor. See col. 4, lines 28-33. However, Applicants submit that Ivanics' rotary element 6 does not include a molding and a plurality of magnets formed inside the molding, where the molding completely surrounds each of the plurality of magnets.

Elliott is directed to a brushless DC motor. Applicants respectfully submit that Elliott also fails to disclose or suggest a magnet unit, freely and rotatably installed between a stator and a rotor, that includes a molding and a plurality of magnets formed inside the molding, where the molding completely surrounds each of the plurality of magnets.

Bernreuther is directed to a permanent magnet rotor. The rotor 5 includes a ring-shaped molded-on member 22 and a permanent magnet ring 6 around the outside of the molded-on member 22. See paragraphs 30 and 31 and Figures 1a and 2. Applicants respectfully submit that Bernreuther fails to disclose or

suggest a magnet unit, freely and rotatably installed between a stator and a rotor, that includes a molding and a plurality of magnets formed inside the molding, where the molding completely surrounds each of the plurality of magnets, as taught by Applicants' claimed invention.

Thus, even if one attempted to combine the teaching of the various references in the manner suggested by the Examiner, Applicants respectfully submit that the combination of Ivanics, Elliott and Bernreuther fails to disclose or suggest a single phase induct motor that includes a magnet unit freely and rotatably installed between the stator and the rotor, where the magnet unit includes a molding and a plurality of magnets formed inside the molding, and the molding completely surrounds each of the plurality of magnets, as recited in newly added claim 22. For at least these reasons, Applicants submit that independent claim 22 is in condition for allowance, and respectfully request such an indication from the Examiner.

Dependent claims 16-21 are also submitted to be in condition for allowance for at least the reasons set forth above with respect to claim 22.

Newly added claims 23-31 recite a single phase induction motor which includes, inter alia, a stator, a rotor, and a magnet unit freely and rotatably installed between the stator and the rotor, where the magnet unit includes a ring magnet. As shown in Applicants' Figures 4 and 5, for example, Applicants' ring magnet includes a single magnetic element having a cylindrical shape. Applicants respectfully submit that neither Ivanics and/or Elliott, individually or in the combination suggested by the Examiner disclose or suggest the present

invention, as defined by claims 23-31. Nor do the other references of record suggested about noted lacking feature.

For at least these reasons, Applicants respectfully submit that claims 23-31 are in condition for allowance, and respectfully request such an indication from the Examiner.

Based on the above, it is respectfully submitted that this application is now in condition for allowance, and a Notice of Allowance is respectfully requested.

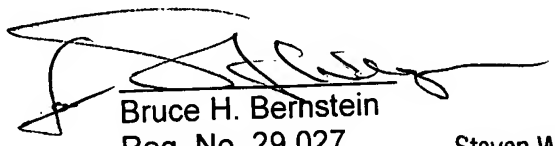
SUMMARY AND CONCLUSION

Entry and consideration of the present amendment, reconsideration of the outstanding Office Action, and allowance of the present application and all of the claims therein are respectfully requested and now believed to be appropriate. Applicants have made a sincere effort to place the present invention in condition for allowance and believe that they have now done so.

Any amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should the Examiner have any questions or comments regarding this response, or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully Submitted,
Seung-Do HAN et al.



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